

## **Attachment #1:**

### **Executive Summary of the Merced to Fresno Preliminary Alternatives Analysis Report**

The preliminary Alternatives Analysis and its associated engineering and environmental analysis reconfirms that the alternatives that closely follow existing rail corridors, the Union Pacific Railroad UPRR and the Burlingame Northern Santa Fe Railroad BNSF best serve the Project Purpose and Need while best meeting the California High Speed Rail Authority's (Authority's) project objectives.

Consistent with the Authority's project objective to maximize the use of existing transportation corridors and rights-of-way, to the extent feasible, the alternatives considered and recommended in the Authority's 2005 Statewide Final Program Environmental Impact Report/Environmental Impact Statement EIR/EIS for the Proposed California High-Speed Train System (HST) and 2008 Bay Area to Central Valley HST Final Program EIR/EIS for the "Central Valley Alignment" followed the two existing freight corridors of the UPRR and the BNSF. Much like this Preliminary Alternatives Analysis Report, these program environmental documents also considered alignment alternatives that deviate from the existing transportation corridors, notably the Western Alternative, which resembles the current Alternative A3 – Western Madera. And like the two prior Final EIR/EIS documents, the alternatives that do not closely follow existing transportation corridors (A3 and A4) are not being recommended to be carried forward into the Project Level EIR/EIS.

The reason for screening out alignment alternatives that do not closely follow existing transportation corridors is that they generally result in greater direct and indirect environmental impacts and have greater growth potential than alignment alternatives that closely follow existing transportation corridors. This is the case in the Merced to Fresno Section of the HST project, where Alternatives A3 – Western Madera and A4 – UPRR/BNSF Hybrid, which depart from existing transportation corridors..

In the Merced to Fresno Section, departing from existing transportation corridors not only directly impacts highly productive farmlands but also has the potential to reduce the viability of surrounding farmlands, giving way to other uses, such as other infrastructures such as transportation and utility systems, that may result in unwanted and unplanned growth patterns. This is particularly alarming to the counties of Merced and Madera, which rely heavily on their unique, rich soil resources for their primary industry. California's rich agricultural is slowly being diminished on the edges of urban communities. The FRA and the Authority established key project objectives to avoid and minimize the effects of the HST System on growth patterns by establishing the goal to maximize the use of existing transportation corridors to the extent possible.

The analysis demonstrated that Alternative A2 – UPRR/SR 99 meets this objective while optimizing travel time and minimizing environmental impacts, at the cost of more elevated profile and potentially more commercial property impacts than other alternatives. However, UPRR has expressed reluctance to collaborate with HST alternatives that either infringe on its right-of-way or on its access to current and future freight customers along its right-of-way throughout the Central Valley.

The only other alternative in the Merced to Fresno Section that meets the HST objective of maximizing the use of the existing transportation corridors is Alternative A1 – BNSF with the South SR152 Wye connection. This alternative, which was selected as preferred by the Authority and the FRA in the 2005 Final Statewide Program EIR/EIS, does not perform as well as Alternative A2 – UPRR/SR 99 in terms of travel time performance and impacts on the natural and residential environment. However, it does provide an alternative to the A2 – UPRR/SR99 that meets the basic project objectives.

The Preliminary Alternatives Analysis Report recommends the following:

- **Carry forward Alternative A2 – UPRR/SR 99.** Alternative A2 – UPRR/SR 99 optimizes travel time and minimizes environmental impacts at the cost of more elevated profile and potentially more community impacts than other alternatives. The cities of Chowchilla and Madera expressed concerns about the impacts of the project through their central business districts, but others, such as the City and County of Merced, City of Atwater, transportation agencies, water districts, and the farming communities in both counties, have expressed support for this route compared to the BNSF and other alternatives that do not use existing transportation corridors. However, UPRR has expressed reluctance to collaborate with HST alternatives that infringe either on its right-of-way or on its access to current and future freight customers along its right-of-way throughout the Central Valley. Because areas in Merced, Madera, and Fresno are constrained portions in this corridor, UPRR's resistance may delay property access and hinder timely design solutions that would enable the HST project to meet its design objectives. The Authority Executive Staff continues to meet with UPRR on a regular basis in an effort to resolve concerns, and the project team is working to design around this limitation, which will require cooperation from UPRR. Lack of cooperation from UPRR could result in delay and make this alternative more expensive to construct.
- **Carry forward the Alternative A1 – BNSF.** The Alternative A1 – BNSF provides a viable alternative to the A2 – UPRR/SR 99 alternative that meets the project purpose and need while also adhering to all the project objectives. It was selected as the Preferred Alternative over the UPRR Route in the 2005 Statewide Program EIR/EIS primarily because "the BNSF alignment avoids most of the urban areas between Modesto and Fresno and would have substantially less constructability issues, would have fewer potential noise, cultural, property, and community impacts, and is estimated to cost about \$400 million less than the UPRR alignment" (California High-Speed Rail Authority 2005). Alternative A1 – BNSF is the longest route by 10 miles and still involves crossings of SR 99 and UPRR that are similar to Alternative A2 – UPRR, but it maintains the legislatively mandated travel time of 2 hours and 40 minutes between San Francisco and Los Angeles.

The benefit of Alternative A1 – BNSF over Alternative A2, is that it may be able to take advantage of the BNSF right-of-way to avoid some residential, critical habitat and farmland impacts. Remaining adjacent to the BNSF, even if not within the BNSF right-of-way, would also minimize the amount of severance on agricultural fields. The alignment's greater distance from several community centers may allow the alternative to remain at-grade for most of its distance and have a lower level of impacts on commercial centers, compared to Alternative A2 – UPRR/SR 99. The Cities of Chowchilla and Madera, continue to echo the sentiments that the BNSF route may result in fewer community impacts compared to Alternative A2 – UPRR/SR 99. The project team is reviewing avoidance options for the community of Le Grand and Planada.

- **Carry forward the Downtown Merced Intermodal Transit Center Station.** This station best satisfies purpose and need, has the best access to the regional highway and public transit system, and has fewer residential impacts. It would be located on the UPRR right-of-way in Downtown Merced and would be served by either Alternative A2 – UPRR/SR 99 or Alternative A1 – BNSF.

**Additionally, the following demonstrates why alternative alignments and station should not be carried forward into the Merced to Fresno Project EIR/EIS:**

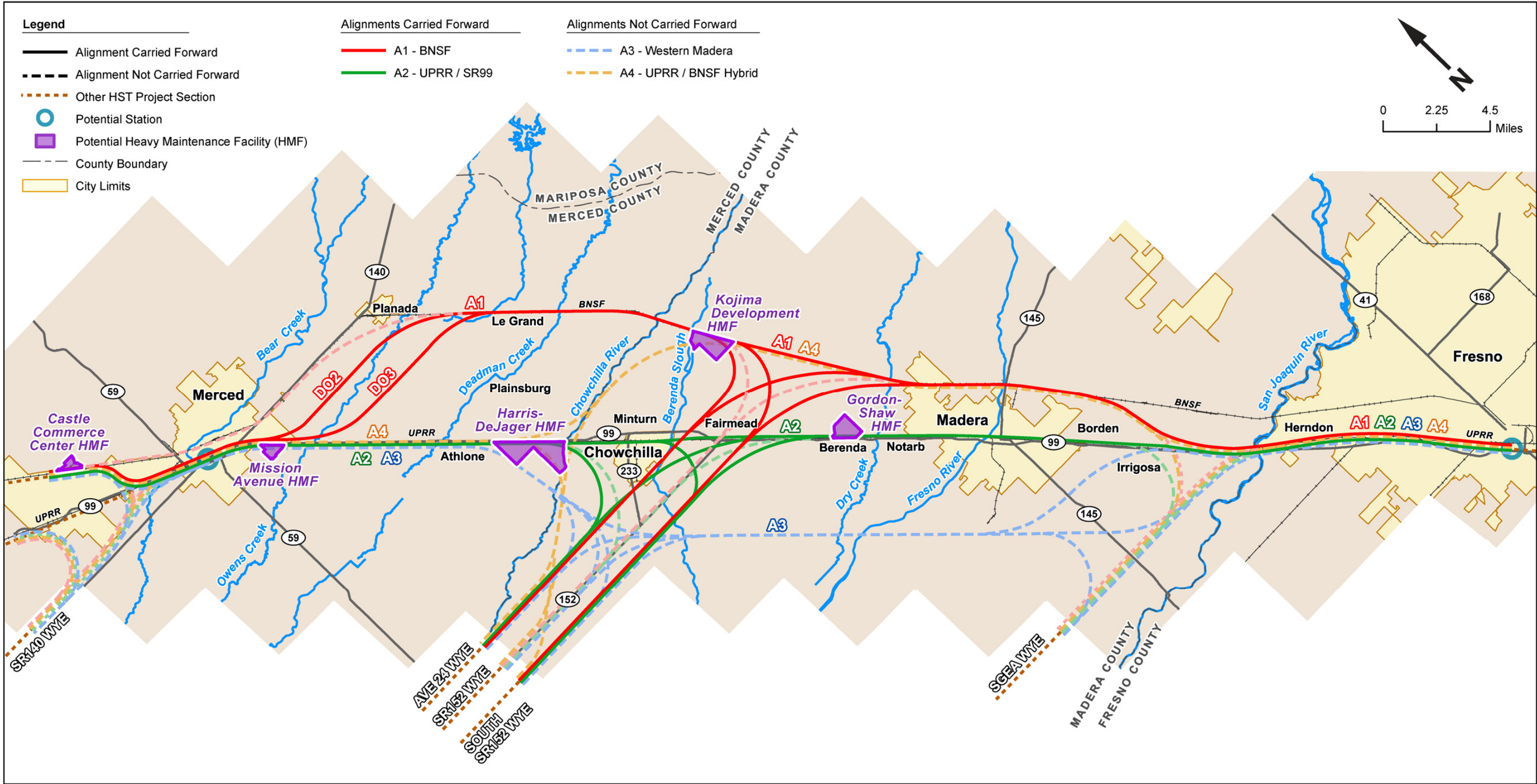
- **Do not carry forward Alternative A3 – Western Madera.** While Alternative A3 provides the fastest travel time between San Francisco and Los Angeles by 30 seconds, it is a Greenfield alternative and does not meet the Authority's key project objective to maximize the use of existing transportation corridors. Alternative A3's deviation from existing transportation corridors in Madera County would result in the high impacts on private properties, agricultural properties, and important farmlands. The high level of impacts is a result of the orientation of the HST and UPRR/SR 99 alignment in relation to the surrounding transportation network. Alternative A3 parallels the diagonal direction of the UPRR/SR 99 corridor in order to provide a more direct route between the Merced and Fresno station. Alternative A3 affects the most acres of prime, unique, and important farmlands which are oriented in the north-south alignment (555 acres), and would bifurcate farmlands, and it would potentially lead to unwanted development patterns that may erode the economic viability of these agricultural lands in Madera County. While the Authority is committed to minimizing and mitigating impacts, the bifurcation of small 40-acre farms may reduce the viability of the remnant

pieces, resulting in larger impacts on the farming community and the possibility of the conversion of farmland to other uses. This impact on Madera may have a more dramatic effect than elsewhere in the state since, according to the 2008 Madera County Agricultural Crop Report, gross production value of Madera County agricultural production was \$1.3 billion in 2008. The latest California Economic Development Department Labor Market information shows Madera with 42,300 total employees and 9,000 agricultural sector employees for 21.2 percent.<sup>1</sup> Additionally, this alternative has received strong opposition from the City and County of Merced and the County of Madera, and it has received strong resistance from members of the agriculture community.

- **Do not carry forward Alternative A4 – UPRR/BNSF Hybrid.** Alternative A4 – UPRR/BNSF Hybrid would not outperform the other alternatives in any criteria measure. It is the slowest alternative in the critical travel time between San Francisco and Los Angeles, taking more than a minute longer than the next slowest alternative. It would potentially result in the highest level of impacts on wetlands, and it would involve most and longest water crossings. Alternative A4 – UPRR/BNSF Hybrid was suggested as a route to modify Alternative A1 – BNSF to avoid Le Grand by traveling a greater distance along the Alternative A2 – UPRR/SR 99 alignment, then shifting eastward to avoid Chowchilla and Madera. However, like Alternative A3 – Western Madera, this alignment results in similar conflict with the Authority's key project objective to use existing transportation corridors and results in a high level of impacts on agricultural lands (436 acres for the north-south alignment) even while trying to remain adjacent to existing transportation corridors. In order to avoid Chowchilla, the alignment requires a large northward curve from Avenue 24 around Chowchilla to link up to the BNSF in a southbound direction. This is not efficient HST design and is not suited to follow existing transportation corridors through prime, unique, and important farmlands. It would result in a series of awkward parcels, reducing economic viability and possibly leading to undesirable development patterns
- **Do not carry forward the Castle Commerce Center Station.** This station is more limited in its ability to serve as a multimodal center. The Castle Commerce Center Station offers limited residential density opportunities, which would also limit the potential for the HST station as a multimodal center, and its access may be constrained due to limited arterial roadways available to the site.
- **Do not carry forward the Merced BNSF/Amtrak Station.** While this station does offer a seamless connectivity with other transit services, it is located within a low-density, well-established residential community. Arterial access from SR 99 would involve travelling through the City of Merced, which would degrade the roadway system. There is no support from Merced for this station, and it would conflict with the local plans for this area.

<sup>1</sup> California Employment Development Department. 2010. Industry Employment Official Monthly Estimates. <http://www.labormarketinfo.edd.ca.gov/cgi/dataanalysis/PeriodSelection.asp?menuchoice=ces>. Accessed March 25, 2010.

Alternatives to Be Carried Forward for the Merced to Fresno HST Section, including Heavy Maintenance Facility Sites



## Attachment #2: Merced to Fresno Heavy Maintenance Facilities Site Proposals and Site Characteristics

The HST System will require different types of maintenance facilities throughout the state. A heavy maintenance facility (HMF) is expected to be situated in the Central Valley because of its location at the heart of the HST System. Therefore, these sites were not pursued. In winter 2009, the California High-Speed Rail Authority Board issued a Request for Expressions of Interest (RFEI) with additional information about site requirements. The RFEI requested that proposals identify potential locations for HMFs along the possible HST routes between Merced and Bakersfield.

Within the Merced to Fresno Section of the HST System, the proposals resulted in five potential sites, as described in the table below and depicted in the attached figure.

**Table 1: Overview of Merced to Fresno Section HMF Proposals**

Name	Location / Description	Property Characteristics	Proposer
Castle Commerce Center	<ul style="list-style-type: none"> <li>• 164 acres</li> <li>• 6 miles northwest of Merced, at the former Castle Air Force Base in northern unincorporated Merced County. Adjacent to and on the east side of the BNSF mainline, 1.75 miles south of the UPRR mainline, off of Santa Fe Drive and Shuttle Road, 2.75 miles from existing SR 99 interchange.</li> <li>• Adjacent to all alternatives under consideration: A1-BNSF A2-UPRR, as well as A3 - Western Madera and A4 - UPRR/BNSF Hybrid.</li> </ul>	<ul style="list-style-type: none"> <li>• Economic incentives: long-term lease for \$1/year, low-cost power, Enterprise Zone, Redevelopment Project Area. Recovery Zone financing potentially available. Foreign Trade Zone, Defense Base Realignment and Closure (BRAC) funding opportunities.</li> <li>• Mostly consistent with General Plan and zoning: Commercial, Industrial, Agriculture.</li> <li>• Outside of floodplain</li> <li>• Direct highway access</li> <li>• Utilities readily available</li> <li>• Hazardous materials cleanup underway</li> <li>• 1 business, 1 agriculture use displaced</li> <li>• Intermittent stream on site</li> <li>• Cultural resource on site</li> </ul>	Greater Merced High-Speed Rail Committee, Inc.
Merced Mission	<ul style="list-style-type: none"> <li>• 222 acres</li> <li>• Southeast Merced, adjacent to and west of the UPRR A2 alignment, 3 miles southeast of proposed Merced station, 2.75 miles from SR 99 interchange along E Mission Avenue.</li> <li>• Adjacent to all alternatives under consideration: A1-BNSF A2-UPRR, as well as A3 - Western Madera and A4 - UPRR/BNSF Hybrid.</li> </ul>	<ul style="list-style-type: none"> <li>• Economic incentives: low-cost power, Enterprise Zone, Redevelopment Project Area, Gateway Redevelopment plan incentives, expedited entitlement processing.</li> <li>• Mostly consistent with General Plan and zoning: Public/General Use; Commercial, Manufacturing/Industrial; Low Density Residential.</li> <li>• Entirely within 100-year floodplain</li> <li>• Special flood hazard area (AO)</li> <li>• 5 potential hazardous materials sites</li> <li>• 1 agriculture, church, 1 multi-family, 7 single family, and 9 business displacements</li> <li>• Perennial stream and canal on site</li> </ul>	Greater Merced High-Speed Rail Committee, Inc.

Harris/ DeJager	<ul style="list-style-type: none"> <li>• 155 acres</li> <li>• North of Chowchilla adjacent to and on west side of the UPRR corridor, along S Vista Road, near SR 99 interchange under construction.</li> <li>• Adjacent to Alternatives A2, UPRR, as well as A3 - Western Madera and A4 - UPRR/BNSF Hybrid.</li> </ul>	<ul style="list-style-type: none"> <li>• Conditionally offered at no cost to the Authority</li> <li>• Joint Powers Authority would provide financing for site and off-site improvements.</li> <li>• No floodplain</li> <li>• Agricultural zoning, agricultural use displacement</li> <li>• Williamson Act land</li> <li>• Wildlife corridor at northern boundary</li> </ul>	City of Chowchilla, and property owners (Harris, DeJager)
Kojima	<ul style="list-style-type: none"> <li>• 400 acres</li> <li>• On BNSF route alignment east of Chowchilla, along Santa Fe Drive and Robertson Boulevard (Avenue 26).</li> <li>• Adjacent to Alternatives A1– BNSF and A4 - UPRR/BNSF Hybrid.</li> </ul>	<ul style="list-style-type: none"> <li>• Conditionally offered at no cost to the Authority</li> <li>• Plan to create a self-contained community allowing for a work/live environment.</li> <li>• Developer will offer financial incentives such as favorable financing (0% down) for HMF employees.</li> <li>• All dam failure inundation area</li> <li>• Agriculture zoning, agriculture use displacement</li> <li>• Williamson Act land</li> </ul>	Madera County, City of Chowchilla, and property owner (Kojima Development)
Gordon Shaw Property	<ul style="list-style-type: none"> <li>• 451 acres</li> <li>• Adjacent to and on east side of the UPRR corridor from north of Berenda Boulevard to Avenue 19.</li> <li>• Adjacent to Alternatives A2 - UPRR.</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Powers Authority to assist in property acquisition and financing for infrastructure improvements.</li> <li>• California Annual Grassland, stream channel with mixed riparian forest</li> <li>• Agriculture zoning, agriculture use displacement</li> <li>• Partially in 100-year floodplain</li> </ul>	Madera County Resource Management Agency

Initial review of these five potential HMF locations found that each site would be accessible by one or more of the alternatives under consideration and that there would be no critical issues that would impede the sites from further consideration. As the alternatives develop further, some of the proposed sites may prove to be more practical than other sites. Design development for the HMF sites has not begun. (Please see the *Map of the Alternatives to Be Carried Forward for the Merced to Fresno HST Section* in the Executive Summary for approximate location adjacent to the Merced to Fresno Section Alternatives.)